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**AMENDMENTS TO CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-11 (cancelled)

Claim 12 (currently amended): An isolated polynucleotide comprising:

- (a) a nucleotide sequence encoding a polypeptide having adenosine 5'-phosphosulfate reductase activity, wherein the polypeptide has an amino acid sequence of at least 95% ~~80%~~ sequence identity, based on a Clustal method of alignment, when compared to SEQ ID NO:8, or
- (b) a full-length complement of the nucleotide sequence of (a).

Claims 13-15 (cancelled)

Claim 16 (previously presented): The polynucleotide of Claim 12, wherein the amino acid sequence of the polypeptide comprises SEQ ID NO:8.

Claim 17 (previously presented): The polynucleotide of Claim 12, wherein the nucleotide sequence comprises SEQ ID NO:7.

Claim 18 (new): A vector comprising the polynucleotide of Claim 12.

Claim 19 (new): A recombinant DNA construct comprising the polynucleotide of Claim 12 operably linked to at least one regulatory sequence.

Claim 20 (new): A method for transforming a cell, comprising introducing into a cell the recombinant DNA construct of Claim 19.

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Claim 21 (new): A cell comprising the recombinant DNA construct of Claim 19.

Claim 22 (new): A method for producing a transgenic plant comprising transforming a plant cell with the recombinant DNA construct of Claim 19 regenerating a plant from the transformed plant cell.

Claim 23 (new): A plant comprising the recombinant DNA construct of Claim 19.

Claim 24 (new): A seed comprising the recombinant DNA construct of Claim 19.

Claim 25 (new): A method for the production of a polypeptide having adenosine 5'-phosphosulfate reductase activity comprising the steps of cultivating the cell of Claim 21 under conditions that allow for the synthesis of the polypeptide and isolating the polypeptide from the cultivated cells, from culture medium, or from both the cultivated cells and the culture medium.